

MANAGEMENT OF CHANGE

Chlorine and Sulfur Dioxide Rail Car Valve Closure System

Equip ID: Rail Car Valve Closure System (RCVCS)		Installed: March of 2012	Manufacturer: Powell Fabrication
Type of Change: (Circle one)			
Chemical	Process Technology	Facility	Equipment
Procedural			
Description: A mitigation system device that automatically closes the liquid and air valves on chlorine railcars in the event of an emergency; i.e., a gas release, a low air pad condition, a power failure or if an e-stop is depressed.			
Duration of Change: (Circle one) Temporary Permanent X			
Technical Basis for the Change: The purpose of this change is to provide the Branch with a mitigation system that will shut down any RC that is connected to CL2 process systems in the event of an emergency as described above.			
Impact of the Change on Health and Safety: As no changes will be required in the current individual chlorine railcar unloading procedures, there is no anticipated impact on personal health and safety.			
Authorization to Proceed with Change: Mike Washington-Branch Manager-March 2012			
Modifications to Existing Operating or Maintenance Procedures?: No changes will be required in the current chlorine railcar unloading processes.			
Is the PHA affected by this change and if so, has a hazard assessment update been performed?: Not applicable as this does not meet any of the parameters under which a PHA is required.			
Is Process Safety Information affected and if so, has a Pre-Startup Safety Review been performed?: Process safety information is impacted by this change only because of the significant increase in maximum intended inventory. A Pre-Startup Safety Review has been performed.			
Necessary Time Period for the Change: This change has been implemented.			
Authorization for Startup: Mike Washington			

Note: All employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall be informed of, and trained in, the change prior to start-up of the process or affected part of the process. This will be accomplished and documented through the conduct of a Pre-Startup Safety Review.

Employee Training

[illegible]

RECORD OF MONTHLY SAFETY MEETING

Branch: M.I. Ford Time Start: 7:30 am
 Trainer: Berry Time Stop: 8:45
 Date: May 10, 2012

- | | | |
|--|---|---|
| <input type="checkbox"/> All Employees | <input type="checkbox"/> Salespersons | <input checked="" type="checkbox"/> Maintenance |
| <input type="checkbox"/> Lab Employees | <input type="checkbox"/> Drivers | <input type="checkbox"/> ENS Operators |
| <input checked="" type="checkbox"/> Office Staff | <input checked="" type="checkbox"/> Plant Personnel | <input type="checkbox"/> Emergency Responders |

Attendees (Typed/printed name and signature required):

James Wright James M. Wright
Jeremiah Dawson Jeremiah Dawson
Berry Kott Berry Kott
Mike Washington Mike Washington

Topic(s) Discussed (please outline training):

Railcar Closure System Training requirement is Attached.

Submit Copy to Tim Gaffney; Retain Original at Branch
 (Attach additional pages if necessary)

SOP for the Railcar Valve Closure System

1. After starting the compressor and the blow vat and applying a vacuum to the liquid lines, disengage the E-stop button on the control panel by pulling it out and resetting the system by pushing the reset button.

The system 'ready' light should light. If the control panel will not reset because it is in an alarm condition, correct the condition before proceeding.

2. After the railcar has been connected and tested for leaks make sure that the railcar valve is not back seated tightly. If it is, break it loose in the closing direction.

Inspect all air hoses for damage or wear.

Inspect each actuator for damaged or worn parts and clean any debris from the exhaust ports.

3. Make sure that the appropriate valve adapter is installed on the actuator and that the connecting pin is in place.
4. Place the actuator on the valve handle and guide the dome clamp onto the dome wall.
5. Ensure that the valve adapter fully engages the valve handle and then snug the dome clamp locking nut against the dome wall.
6. Repeat steps 2 through 5 for each additional actuator.
7. Install the hose manifold bracket that will allow the hoses to reach all the actuators and then snug the locking nut.
8. Connect an air supply hose from the hose manifold to each of the actuators and ensure that they are properly engaged.
9. Install the male end of the air supply hose to the female swing coupling on the main air supply pipe and then bleed off any residual pressure by connecting the female end of the hose to the male bleed off fitting on the air manifold.
10. After all the pressure has been bled off, connect the supply hose to the hose manifold. **Note:** Failure to perform the above could result in the actuators closing the railcar valves.
11. Inspect all air hose connections to ensure they are properly connected and check the control panel to ensure that the system 'ready' light is on.

SOP for Manually Opening or Closing a Railcar Valve When Actuators are Mounted on the Railcar

1. Disconnect the air supply going to the actuator that is mounted on the valve you want to manually open or close.
2. Lift up and pivot the actuator out of the way.
3. Open or close the railcar valve.
4. Reinstall the actuator on the railcar valve, ensuring that the valve adapter fully engages the valve handle.
5. Reconnect the air supply hose to the actuator and ensure that it is properly connected.

SOP for Removal of Valve Closure System When Other Railcars Are In Use

1. Disconnect the main air supply hose at both ends and then disconnect the air supply hoses going to each actuator from the air supply manifold.
2. Remove the actuators and air supply manifold from the railcar dome.
3. Manually close the railcar valves.
4. Properly store all air hoses and actuators when not in use.

SOP for Removal of Valve Closure System at the End of The Day

1. At the control panel push the E-Stop button so that the actuators will close the railcar valves. Leave the E-Stop button engaged during the off hours so that a low air pressure alarm won't sound if the systems air pressure drops below 80psi
2. Disconnect main air supply hose at both ends and then disconnect the air supply hoses going to each actuator from the air supply manifold.
3. Remove the actuators and air supply manifold from the rail car dome.
4. Ensure that the railcar valves are fully closed.
5. Properly store all air hoses and actuators.

Note: This SOP should also be used as a daily operational check. Make noted of any equipment malfunction and have it corrected.

3. HOT WORK PERMIT

a) Process/s
involved:

STICK WELDING

b) Description

of work: FABRICATION OF 2 SHELF BRACKETS

c) Dates

of work. From: 7 MAY 2012 To: 17 MAY 2012 Or blanket: _____

This Hot Work Permit ("Permit") may not be used unless the work area is in compliance with all items listed, in section 4. a) through d) below.

4. HOT WORK CHECKLIST:

a) The object to be welded, cut, or brazed.

Select the appropriate statement below by checking the box to its left.

☒ The object to be welded, cut, or brazed has been moved to a place that is at least 35 feet from all combustible materials.

Or:

☐ The object to be welded, cut, or brazed cannot readily be moved.

When the object to be welded, cut, or brazed can not be moved all combustibles shall be moved 35 feet away from the hot work area. Combustibles that can not be moved must be protected with flameproof shields (see the Welding Equipment section of the Granger catalogue).

Note: Shields can be used to confine the area immediately adjacent to the hot work (i.e., a booth), or a larger area using larger barriers (i.e., fire proof curtains or blankets). In either case guards must thoroughly prevent heat, sparks, or slag from leaving the hot work area.

If the object to be welded, cut, or brazed cannot be moved, certify by checking the box to the left of the item on the next page the conditions listed have been met.

Revised:03/17/99

- ☐ All movable fire hazards have been taken at least 35 feet from the work site, and/or shields are in place that will thoroughly confine the heat, sparks, and slag generated, and protect all fire hazards that can not be moved

b) Work Area, General Requirements:

Certify by checking the "Confirmed" boxes below that the conditions listed have been met. If a particular condition does not exist at your facility (i.e. your facility does not have a sprinkler system for fire control) check the "N/A" box. The N/A box has been omitted for items where it is not an option.

If the hot work area is in a building that has a sprinkler system for fire control this system must be in working condition.

☐ Confirmed

☒ N/A

Wherever there are floor openings (i.e., holes, man ways, stairs, etc) or cracks in the flooring that cannot be closed, precautions must be taken so that no readily combustible materials on the floor below will be exposed to sparks which might drop through the floor. The same precautions shall be observed with regard to cracks or holes in walls, open doorways, and open or broken windows.

All applicable holes in floors and walls have been covered or blocked to prevent heat, sparks, or slag from passing through them and contacting combustible materials.

☐ Confirmed

☒ N/A

Suitable fire extinguishing equipment is ready for instant use. Such equipment can consist of pails of water, buckets of sand, a hose, or appropriate portable fire extinguishers depending upon the nature and quantity of the combustible material exposed.

☒ Confirmed

The hazardous characteristics of any hazardous materials in storage in the vicinity of the hot work area have been evaluated (using the MSDS) by everyone signing this permit, (i.e., the supervisor, the designated hot work employee, and the firewatcher as per section 4.(c) below).

☒ Confirmed

☐ N/A

The permitted area is free of fumes (i.e., mixtures of fumes from flammable cabinets), airborne dusts or any other hazard that can form a potentially explosive atmosphere.

☒ Confirmed

All ducts and/or conveyor systems that might carry sparks to distant combustibles have been identified and suitably protected or shut down.

☐ Confirmed

☒ N/A

Where hot work is approved near walls, partitions, ceilings, or roofs of combustible construction, fire-resistant shields or guards have been erected to prevent ignition.

☐ Confirmed

☒ N/A

If welding is to be done on a metal wall, partition, ceiling or roof, precautions shall be taken to prevent ignition of combustibles on the other side. To accomplish this combustible materials have been moved or a fire watch has been provided on the opposite side of the wall from the hot work.

☐ Confirmed

☒ N/A

Hot work will not be attempted on a metal partition, wall, ceiling or roof having a combustible covering nor on walls or partitions of combustible sandwich-type panel construction

☐ Confirmed

☒ N/A

Cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings or roofs will not be undertaken if the work is close enough to cause ignition by conduction.

☐ Confirmed

☒ N/A

c) Fire Watch:

When necessary, someone other than the person performing the hot work will be designated to perform a fire watch. A fire watch is mandatory when hot work is performed in locations where a serious fire might develop. A serious fire is one that will not burn itself out harmlessly, or can not be put out easily by the person performing the hot work with the extinguishing media required by section 4.(b) above. In addition, a fire watch is required if any of the following conditions exist:

- If combustible materials are present in building construction (i.e., wood stud walls, combustible flooring and glues, etc.) within 35 feet of the operation.
- If combustible materials are present in immovable objects within 35 feet of the operation.
- If there are wall or floor openings within 35 feet that expose combustible material in adjacent areas including concealed spaces in walls or floors.
- If combustibles are more than 35 feet away but could be easily ignited by sparks.
- If combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and are likely to be ignited by conduction or radiation.

Please note the designated fire watch personnel must have readily available, and be trained in the use of, suitable extinguishing equipment. They must be familiar with, and able to sound the fire alarm in the event of a fire. They shall watch for fires in all exposed areas, try to extinguish them (only when obviously within the capacity of the equipment available), or sound the alarm. For the purpose of detecting and extinguishing smoldering fires, the fire watch must continue for thirty (30) minutes after welding or cutting operations have ended.

Select one of the following:

- ☐ This hot work permit requires a fire watch (complete the certification below).
- ☒ This hot work permit does not require a fire watch.

d) Certifications

Supervisor

I have thoroughly examined the location where the Hot Work will be performed. I have determined that the area and the individuals who are party to this permit (listed below) are in compliance with the requirements of this permit.

Supervisor's Name (printed) James M Wright

Signed: [Signature], Date 2012 05 07

Hot Work Employee

I have been instructed in the use of this permit. I have been trained in the proper use of the equipment I will use to complete the work described below. I have read and understand the requirements of this permit and agree to maintain compliance throughout the scope of this work.

Hot Work Employees
Name (printed) GARY KOHR

Signed: [Signature], Date: 20120507

Fire Watch (if required in 4.(c) above):

I have been instructed on how to perform this duty. I understand the potential hazards and the specific fire hazards presented by this permit. I will personally inspect the work area thirty minutes after hot work activity is stopped and certify that the area is safe.

Fire Watcher Name (printed) _____

Signed: _____, Date _____